Author Index
Volume 44, 1997

A

Ando, Akira.
Synthesis of a Fluorine Analog of Hematoporphyrin by Ring Closure. 89

Ando, Akira.
Synthesis of Taxoids I. Regioselective Lewis Acid-mediated Ring-Opening of Aryl Orthoacetates. 305

Ando, Wataru.
Synthesis and Structures of Bis[*N,N'*-bis(trimethylsilyl)-2-methyl-1,3,2-diazasilacylopentane] and Bis(*N*-trimethysilyl-2-methyl-4,5-benzo-1,3,2-diazasilacyclopentene). 177

Aoe, Keiichi.
Acid-catalyzed Photpreaction of 6-Chloro-1,3-dimethyluracil to *p*- and *m*-Xylene: Formation of Novel Photocycloadducts, 6-Methylene-9,11,x-trimethyl-9,11-diazapentacyclo[6.4.0.0^{1,3}.0^{2,5}.0^{4,8}]dodecane-10,12-diones and 5-Methylene-9,11,x-trimethyl-9,11-diazapentacyclo[6.4.0.0^{1,3}.0^{2,6}.0^{4,8}]dodecane-10,12-diones. 467

Ariga, Masahiro.
2-Methyl-4-nitroisoxazolin-5-one: Ring Transformation to 3-Nitropyrroles. 81

Asano, Kumiko.
Synthesis and Structures of Bis[*N,N'*-bis(trimethylsilyl)-2-methyl-1,3,2-diazasilacylopentane] and Bis(*N*-trimethylsilyl-2-methyl-4,5-benzo-1,3,2-diazasilacyclopentene). 177

B

Banik, Bimal K.
Environmentally Benign Chemistry: Microwave-induced Stereocontrolled Synthesis of β-Lactam Synthons. 405

Bernardinelli, Gérald.
cis-Fused Dihydrofurano-1,2,4-trioxanes. 367

Björk, Patrick.
Synthesis of Various Substituted Benzo[*c*]-2,7-naphthyridines and an Approach towards the Skeleton of Meridine. Considerations about the Effect of Copper(II) Oxide. 237

Bose, Ajay K.
Environmentally Benign Chemistry: Microwave-induced Stereocontrolled Synthesis of β-Lactam Synthons. 405

C

Cheng, Dai.
Syntheses of Imidazoles and Pyrroles: BetMIC and TosMIC as Complementary Reagents. 67

Choi, Nami.
Synthesis and Structures of Bis[*N,N'*-bis(trimethylsilyl)-2-methyl-1,3,2-diazasilacylopentane] and Bis(*N*-trimethylsilyl-2-methyl-4,5-benzo-1,3,2-diazasilacyclopentene). 177

D

Dekhane, Mouloud.
Ethyl α-Amino-β,β-diethoxypropionate, a Useful Synthon for the Preparation of 3,4-Fused Pyridine-6-carboxylates from Aromatic Aldehydes. 379

Dodd, Robert H.
Ethyl α-Amino-β,β-diethoxypropionate, a Useful Synthon for the Preparation of 3,4-Fused Pyridine-6-carboxylates from Aromatic Aldehydes. 379

E

Eguchi, Shoji.
Synthesis of Indolizidine Derivatives Trifluoromethylated at Bridgehead Position *via* Acyl Iminium Ion Intermediates Derived from Ring-Chain Tautomerism of 5,5,5-Trifluoro-4-oxopentanoyl Arylethylamides. 227

F

Fuji, Kaoru.
A Silver Salt — Iodine Reagent System for the Deprotection of Monothioacetals and Dithioacetals. 393
Fujii, Tozo.
The 7-*N*-Oxides of Purines Related to Nucleic Acids: Their Chemistry, Synthesis, and Biological Evaluation. 573
Fukuchi, Iwao.
Diastereoselective 1,3-Dipolar Cycloaddition of 2-(α,β-Unsaturated) Acyl-3-phenyl-*l*-menthopyrazoles. 289
Fukumoto, Kelichiro.
A Novel Route to Diverse Fused Oxabicyclo[3.2.1]-octanes — A Ring Modified Trichothecanes. 125
Fukumoto, Kelichiro.
Synthesis of Benzo[*a*]quinolizines by the Intramolecular Double Michael Reaction under Three Different Conditions. 531
Fukusaka, Kiyoshi.
Diastereoselective 1,3-Dipolar Cycloaddition of 2-(α,β-Unsaturated) Acyl-3-phenyl-*l*-menthopyrazoles. 289
Furukawa, Naomichi.
Simple Procedure for the Synthesis of 2,5-Bis(silylated) Thiophene *S*-Oxides with *m*-Chloroperbenzoic Acid in the Presence of $BF_3(Et_2O)$. 61

G

Gronowitz, Salo.
Synthesis of Various Substituted Benzo[*c*]-2,7-naphthyridines and an Approach towards the Skeleton of Meridine. Considerations about the Effect of Copper(II) Oxide. 237

H

Hamada, Yasumasa.
A New Efficient Synthesis of Nicotianamine and 2'-Deoxymugineic Acid. 519
Han, Kang.
Studies with Plant Cell Cultures of the Chinese Herbal Plant, *Tripterygium wilfordii*. Synthesis and Biotransformation of Diterpene Analogues. 95
Harada, Katsumasa.
A Secure and Convenient Synthesis of 5-Amino-1,2,3-thiadiazole by Diazoacetonitrile. 197
Harada, Katsumasa.
Convenient One-Pot Synthesis of Sodium Salt of 5-Mercapto-1,2,3-thiadiazole. 459
Harada, Naoyuki.
Synthesis of Taxoids I. Regioselective Lewis Acid-mediated Ring-Opening of Aryl Orthoacetates. 305
Hashimoto, Kimiko.
Synthesis of Optically Pure β-Phenylselenoalanine through Serine-β-lactone: A Useful Precursor of Dehydroalanine. 319
Hashiyama, Tomiki.
Synthesis of Taxoids I. Regioselective Lewis Acid-mediated Ring-Opening of Aryl Orthoacetates. 305
Hayashi, Hiroyuki.
Reduction of Indigo: Simple Syntheses of 3-Acetoxy-, 1-Acetyl-2,3-dihydro-, 3-Acetoxy-3'-acetyl-, 3-Acetoxy-1,3'-diacetyl-2,2'-bisindoles, and 2,2'-Bisindole. 169
Henmi, Toshiyuki.
A New Synthesis of 1-Hydroxyindoles and Spectra of 1-Hydroxyindole. 157
Higaki, Masato.
Simple Procedure for the Synthesis of 2,5-Bis(silylated) Thiophene *S*-Oxides with *m*-Chloroperbenzoic Acid in the Presence of $BF_3(Et_2O)$ 61
Higashino, Takeo.
Synthesis and Reactivities of 1,3-Dimethyl-2-(α-hydroxybenzyl)imidazolium and 1,3-Dimethyl-2-(α-hydroxybenzyl)benzimidazolium Iodides . 417
Hiramatsu, Hajime.
Acid-catalyzed Photoreaction of 6-Chloro-1,3-dimethyluracil to *p*- and *m*-Xylene: Formation of Novel Photocycloadducts, 6-Methylene-9,11,x-trimethyl-9,11-diazapentacyclo[6.4.0.0^{1,3}.0^{2,5}.0^{4,8}]dodecane-10,12-diones and 5-Methylene-9,11,x-trimethyl-9,11-diazapentacyclo[6.4.0.0^{1,3}.0^{2,6}.0^{4,8}]dodecane-10,12-diones. 467
Hirata, Terukage.
A Facile Synthesis of 2-Acylimino-3-biphenylmethyl-1,3,4-thiadiazoline Derivatives. 133
Hirayama, Tetsuya.
Synthesis of Thiophene Derivatives Bearing a Silicon Atom. 509
Hörnfeldt, Anna-Britta.
Synthesis of Various Substituted Benzo[*c*]-2,7-naphthyridines and an Approach towards the Skeleton of Meridine. Considerations about the Effect of Copper(II) Oxide. 237
Hojo, Masaru.

A Facile and Convenient Synthetic Method for Fluorine-containing 1,2-Dihydropyrimidines and Pyrimidines. 349

Hongo, Hiroshi.
Synthesis of New Chiral Catalysts, Isoquinuclidinyl-methanols, for the Enantioselective Addition of Diethylzinc to Aryl Aldehydes. 435

Hori, Nobuyuki.
Rearrangement-Ring Expansion Reaction of Functionalized Cyclic Ethers. Stereoselective Synthesis of the ST- and XY-Ring Systems of Maitotoxin. 105

Hoshino, Osamu.
Synthesis of Thiophene Derivatives Bearing a Silicon Atom. 509

Hyodo, Ikumi.
Synthesis of β- and Iso-β-cycloawaodorin. 71

I

Ihara, Masataka.
Synthesis of Benzo[*a*]quinolizines by the Intramolecular Double Michael Reaction under Three Different Conditions. 531

Ikeda, Masazumi.
Synthesis of Tetrahydro-1-benzazocin-2(1*H*)-ones Using 8-*endo-trig* Radical Cyclization of 2,2-Bis-(phenylthio)-*N*-[*o*-(prop-2-enyl)phenyl]acetamides. 203

Imagawa, Hiroshi.
Synthesis of β- and Iso-β-cycloawaodorin. 71

Imanishi, Takeshi.
Syntheses of 1-Substituted (S_S)-3-*p*-Tolylsulfinyl-1,4-dihydropyridines, Chiral NADH Model Compounds. 537

Inamoto, Naoki.
Tandem Peterson-Michael Reaction Using α-Silylalkylphosphine Chalcogenides and Horner-Emmons Reaction of *in situ* Generated α-Carbanions of Its Products. 487

Inoue, Teruhiko.
Convenient One-Pot Synthesis of Sodium Salt of 5-Mercapto-1,2,3-thiadiazole. 459

Irako, Naoko.
A New Efficient Synthesis of Nicotianamine and 2'-Deoxymugineic Acid. 519

Ishibashi, Hiroyuki.
Synthesis of Tetrahydro-1-benzazocin-2(1*H*)-ones Using 8-*endo-trig* Radical Cyclization of 2,2-Bis-(phenylthio)-*N*-[*o*-(prop-2-enyl)phenyl]acetamides. 203

Ishibashi, Masami.
Amphidinolides: Unique Macrolides from Marine Dinoflagellates. 543

Ishida, Yohei.
Synthesis of Benzo[*a*]quinolizines by the Intramolecular Double Michael Reaction under Three Different Conditions. 531

Ishii, Akihiko.
Synthesis of Highly Congested Bi- and Terthiophenes; 3,4,3',4'-Tetra-*tert*-butylbithiophene and 3',4'-Di-*tert*-butyl-2,2':5'2"-terthiophene. 75

Ishii, Akihiko.
Formation of Cyclic Oligosulfides by Reaction of Hydrazones with Disulfur Dichloride. 255

Ishitani, Youichi.
6-Acetyl-8-hydroxy-2,2-dimethylchromene, an Antioxidant in Sunflower Seeds; Its Isolation and Synthesis and Antioxidant Activity of Its Derivatives. 139

Ishizuka, Tadao.
Facile Synthesis of (+)- and (-)-Geissman-Waiss Lactones. 479

Itaya, Taisuke.
The 7-*N*-Oxides of Purines Related to Nucleic Acids: Their Chemistry, Synthesis, and Biological Evaluation. 573

Ito, Yoshihiko.
New Synthetic Access to 1,3-Diaza-5-sila-2-boracyclohexane Frameworks by the Reaction of Borane with Bis[(*N*-arylimino)organosilylmethyl]silanes. 121

Iwamoto, Ken-ichi.
Synthesis and Reactivities of 1,3-Dimethyl-2-(α-hydroxybenzyl)imidazolium and 1,3-Dimethyl-2-(α-hydroxybenzyl)benzimidazolium Iodides. 417

Iwasa, Kazuto.
Synthesis of New Chiral Catalysts, Isoquinuclidinyl-methanols, for the Enantioselective Addition of Diethylzinc to Aryl Aldehydes. 435

J

Jefford, Charles W.
cis-Fused Dihydrofurano-1,2,4-trioxanes 367

Jin, Shu-juan.
cis-Fused Dihydrofurano-1,2,4-trioxanes 367

Jin, Yi-Nan.
Formation of Cyclic Oligosulfides by Reaction of Hydrazones with Disulfur Dichloride. 255

K

Kajizuka, Yoshinori.
Photoinduced Molecular Transformations. Part 160. Furan Annelation of 2-Hydroxynaphthoquinone Involving Photochemical Addition and Radical Fragmentation: Exclusion of the Intermediacy of [2+2] Cycloadduct in a One-Pot Formation of Furanoquinones by the Regioselective 3+2 Photoaddition of Hydroxyquinones with Alkenes. 341

Kameda, Yukihiko.
Thiovalidamine Derivatives of *manno*- and *gluco*-Type: Remote Activation and Anchimeric Assistance. 427

Kan, Yukiko.
Synthesis of β- and Iso-β-cycloawaodorin. 71

Kashima, Choji.
Diastereoselective 1,3-Dipolar Cycloaddition of 2-(α,β-Unsaturated) Acyl-3-phenyl-*l*-menthopyrazoles. 289

Kataoka, Seigo.
Synthesis and Chemiluminescence of 1,3-Disubstituted 4-Hydroxypyrazolo[4',3':5,6]pyrido[2,3-*d*]pyridazine-5,8-(6*H*,7*H*)-diones. 85

Kato, Tadahiro.
6-Acetyl-8-hydroxy-2,2-dimethylchromene, an Antioxidant in Sunflower Seeds; Its Isolation and Synthesis and Antioxidant Activity of Its Derivatives. 139

Katoh, Akira.
Structural Analysis of *N*-(ω-Phenylalkyl)substituted Quinoxalin-2(1*H*)-ones and -thiones. 357

Katritzky, Alan R.
Syntheses of Imidazoles and Pyrroles: BetMIC and TosMIC as Complementary Reagents. 67

Kawamura, Mitsuhiro.
A New Enantiocontrolled Route to (-)-Kainic Acid. 129

Kawashima, Takayuki.
Tandem Peterson-Michael Reaction Using α-Silylalkylphosphine Chalcogenides and Horner-Emmons Reaction of *in situ* Generated α-Carbanions of Its Products. 487

Kikugawa, Yasuo.
A New Synthesis of 1-Hydroxyindoles and Spectra of 1-Hydroxyindole. 157

Kinomura, Tatsuhiko.
A Facile and Convenient Synthetic Method for Fluorine-containing 1,2-Dihydropyrimidines and Pyrimidines. 349

Kishikawa, Kuniyuki.
A Novel Reaction of an Overcrowded Germylene with Isothiocyanate Leading to the Formation of 4-Imino-1,3,2-dithiagermetane Ring System. 149

Kiuchi, Fumiyuki.
Thiovalidamine Derivatives of *manno*- and *gluco*-Type: Remote Activation and Anchimeric Assistance. 427

Kobayashi, Jun'ichi.
Amphidinolides: Unique Macrolides from Marine Dinoflagellates. 543

Kobayashi, Kazuhiro.
Photoinduced Molecular Transformations. Part 160. Furan Annelation of 2-Hydroxynaphthoquinone Involving Photochemical Addition and Radical Fragmentation: Exclusion of the Intermediacy of [2+2] Cycloadduct in a One-Pot Formation of Furanoquinones by the Regioselective 3+2 Photoaddition of Hydroxyquinones with Alkenes. 341

Kobayashi, Naoko.
Synthesis and Cytotoxicity of 5-Carbo Analogues of Acetomycin. 277

Kohmoto, Shigeo.
cis-Fused Dihydrofurano-1,2,4-trioxanes. 367

Koizumi, Toru.
Optically Pure Alkoxychlorosulfuranes. Synthesis and Transformation to Chiral Sulfoxides, *N*-*p*-Tosylsulfilimines, and Sulfonium Ylides. 325

Kouyama, Takafumi.
Facile Synthesis of (+)- and (-)-Geissman-Waiss Lactones. 479

Koyama, Mayumi.
Synthesis of a Fluorine Analog of Hematoporphyrin by Ring Closure. 89

Kumadaki, Itsumaro.
Synthesis of a Fluorine Analog of Hematoporphyrin by Ring Closure. 89

Kunieda, Takehisa.
Facile Synthesis of (+)- and (-)-Geissman-Waiss Lactones. 479

Kurachi, Akihito.
Synthesis and Reactivities of 1,3-Dimethyl-2-(α-hydroxybenzyl)imidazolium and 1,3-Dimethyl-2-(α-hydroxybenzyl)benzimidazolium Iodides. 417

Kuri-Brena, Francisco.
Studies with Plant Cell Cultures of the Chinese Herbal

Plant, *Tripterygium wilfordii*. Synthesis and Biotransformation of Diterpene Analogues. 95

Kutney, James P.

Studies with Plant Cell Cultures of the Chinese Herbal Plant, *Tripterygium wilfordii*. Synthesis and Biotransformation of Diterpene Analogues. 95

L

Le Hyaric, Mireille.

Ethyl α-Amino-β,β-diethoxypropionate, a Useful Synthon for the Preparation of 3,4-Fused Pyridine-6-carboxylates from Aromatic Aldehydes. 379

Liu, Hsing-Jang.

Synthetic Studies of Forskolin. A Diels-Alder Approach to Corey's Endoperoxide. 143

M

Malm, Johan.

Synthesis of Various Substituted Benzo[*c*]-2,7-naphthyridines and an Approach towards the Skeleton of Meridine. Considerations about the Effect of Copper(II) Oxide. 237

Manhas, Maghar S.

Environmentally Benign Chemistry: Microwave-induced Stereocontrolled Synthesis of β-Lactam Synthons. 405

Manmaru, Kyoko.

A Novel Reaction of an Overcrowded Germylene with Isothiocyanate Leading to the Formation of 4-Imino-1,3,2-dithiagermetane Ring System. 149

Maruyama, Kazuhiro.

Synthesis of a Covalently Linked Bacteriopyropheophorbide — Pyropheophorbide Hybrid Dimer. 165

Matsunaga, Hirofumi.

Facile Synthesis of (+)- and (-)-Geissman-Waiss Lactones. 479

Matsuoka, Yoshiyuki.

Synthesis and Reactivities of 1,3-Dimethyl-2-(α-hydroxybenzyl)imidazolium and 1,3-Dimethyl-2-(α-hydroxybenzyl)benzimidazolium Iodides. 417

Matsuura, Fumiyoshi.

A New Efficient Synthesis of Nicotianamine and 2'-Deoxymugineic Acid. 519

Milanova, Radka K.

Studies with Plant Cell Cultures of the Chinese Herbal Plant, *Tripterygium wilfordii*. Synthesis and Biotransformation of Diterpene Analogues. 95

Minematsu, Hiroki.

Synthesis and Chemiluminescence of 1,3-Disubstituted 4-Hydroxypyrazolo[4',3':5,6]pyrido[2,3-*d*]pyridazine-5,8-(6*H*,7*H*)-diones. 85

Minowa, Takayuki.

A Novel Synthesis of 1,2-Dehydro-1-aminophosphonates *via* Beckmann Rearrangement. Application to the Synthesis of α-Aminophosphonic Acid Derivatives. 111

Miwa, Yuko.

2-Methyl-4-nitroisoxazolin-5-one: Ring Transformation to 3-Nitropyrroles. 81

Miyashita, Akira.

Synthesis and Reactivities of 1,3-Dimethyl-2-(α-hydroxybenzyl)imidazolium and 1,3-Dimethyl-2-(α-hydroxybenzyl)benzimidazolium Iodides. 417

Miyashita, Kazuyuki.

Syntheses of 1-Substituted (S_S)-3-*p*-Tolylsulfinyl-1,4-dihydropyridines, Chiral NADH Model Compounds. 537

Miyata, Junji.

A Novel Route to Diverse Fused Oxabicyclo[3.2.1]-octanes --- A Ring Modified Trichothecanes. 125

Mori, Miwako.

Novel Synthesis of Heterocycles Using Nickel(0)-catalyzed [2+2+2] Cocyclization: Catalytic Asymmetric Synthesis of Isoindoline and Isoquinoline Derivatives. 443

Mori, Yoshikatsu.

A Secure and Convenient Synthesis of 5-Amino-1,2,3-thiadiazole by Diazoacetonitrile. 197

Murakami, Masahiro.

New Synthetic Access to 1,3-Diaza-5-sila-2-boracyclohexane Frameworks by the Reaction of Borane with Bis[(*N*-arylimino)organosilylmethyl]silanes. 121

Murakami, Nobutoshi.

Synthesis and Central Nervous System Stimulant Activity of Camphor-1,2,4-triazines Fused with 1,2,4-Triazole, Tetrazole and 1,2,4-Triazine. 117

Murata, Mitsuo.

Synthesis and Central Nervous System Stimulant Activity of Camphor-1,2,4-triazines Fused with 1,2,4-Triazole, Tetrazole and 1,2,4-Triazine. 117

Musgrave, Richard P.

Syntheses of Imidazoles and Pyrroles: BetMIC and

TosMIC as Complementary Reagents. 67

N

Nagai, Shin-ichi.
Synthesis and Central Nervous System Stimulant Activity of Camphor-1,2,4-triazines Fused with 1,2,4-Triazole, Tetrazole and 1,2,4-Triazine. 117

Nagao, Yoshimitsu.
A Facile Synthesis of 2-Acylimino-3-biphenylmethyl-1,3,4-thiadiazoline Derivatives. 133

Nagasawa, Kazuo.
Rearrangement-Ring Expansion Reaction of Functionalized Cyclic Ethers. Stereoselective Synthesis of the ST- and XY-Ring Systems of Maitotoxin. 105

Nagatsu, Akito.
Synthesis and Central Nervous System Stimulant Activity of Camphor-1,2,4-triazines Fused with 1,2,4-Triazole, Tetrazole and 1,2,4-Triazine. 117

Nakai, Mamoru.
A Secure and Convenient Synthesis of 5-Amino-1,2,3-thiadiazole by Diazoacetonitrile. 197

Nakamoto, Tomoko.
Thiovalidamine Derivatives of *manno*- and *gluco*-Type: Remote Activation and Anchimeric Assistance. 427

Nakamura, Daisaku.
A Silver Salt — Iodine Reagent System for the Deprotection of Monothioacetals and Dithioacetals. 393

Nakamura, Mio.
Tandem Peterson-Michael Reaction Using α-Silylalkylphosphine Chalcogenides and Horner-Emmons Reaction of *in situ* Generated α-Carbanions of Its Products. 487

Nakano, Hiroto.
Synthesis of New Chiral Catalysts, Isoquinuclidinylmethanols, for the Enantioselective Addition of Diethylzinc to Aryl Aldehydes. 435

Nakata, Tadashi.
Rearrangement-Ring Expansion Reaction of Functionalized Cyclic Ethers. Stereoselective Synthesis of the ST- and XY-Ring Systems of Maitotoxin. 105

Nakayama, Juzo.
Synthesis of Highly Congested Bi- and Terthiophenes; 3,4,3',4'-Tetra-*tert*-butylbithiophene and 3',4'-Di-*tert*-butyl-2,2':5'2"-terthiophene. 75

Nakayama, Juzo.
Formation of Cyclic Oligosulfides by Reaction of Hydrazones with Disulfur Dichloride. 255

Nemoto, Hideo.
A Novel Route to Diverse Fused Oxabicyclo[3.2.1]-octanes — A Ring Modified Trichothecanes. 125

Nishide, Kiyoharu.
A Silver Salt — Iodine Reagent System for the Deprotection of Monothioacetals and Dithioacetals. 393

Nishimata, Toyoki.
Novel Synthesis of Heterocycles Using Nickel(0)-catalyzed [2+2+2] Cocyclization: Catalytic Asymmetric Synthesis of Isoindoline and Isoquinoline Derivatives. 443

Nishimoto, Masahiro.
Syntheses of 1-Substituted (S_S)-3-*p*-Tolylsulfinyl-1,4-dihydropyridines, Chiral NADH Model Compounds. 537

Nishio, Takehiko.
Structural Analysis of *N*-(ω-Phenylalkyl)substituted Quinoxalin-2(1*H*)-ones and -thiones. 357

Nishiwaki, Nagatoshi.
2-Methyl-4-nitroisoxazolin-5-one: Ring Transformation to 3-Nitropyrroles. 81

Nishiyama, Toshihiko.
Syntheses of 1-Substituted (S_S)-3-*p*-Tolylsulfinyl-1,4-dihydropyridines, Chiral NADH Model Compounds. 537

Nishizawa, Muglo.
Synthesis of β- and Iso-β-cycloawaodorin. 71

Node, Manabu.
A Silver Salt — Iodine Reagent System for the Deprotection of Monothioacetals and Dithioacetals. 393

O

Obata, Ken-ichi.
Synthesis of Tetrahydro-1-benzazocin-2(1*H*)-ones Using 8-*endo-trig* Radical Cyclization of 2,2-Bis-(phenylthio)-*N*-[*o*-(prop-2-enyl)phenyl]acetamides. 203

Obika, Satoshi.
Syntheses of 1-Substituted (S_S)-3-*p*-Tolylsulfinyl-1,4-dihydropyridines, Chiral NADH Model Compounds. 537

Ogasawara, Kunio.
A New Enantiocontrolled Route to (-)-Kainic Acid. 129

Ogawa, Kazuo.

The 7-*N*-Oxides of Purines Related to Nucleic Acids: Their Chemistry, Synthesis, and Biological Evaluation. 573

Ogawa, Satoshi.
New Sulfur-Carbon Displacement Reaction and Systematic Desulfurization in Multi-Sulfur Linkages of Benzopentathiepin. 187

Ogura, Katsuyuki.
Practical Synthesis of (*S*)-3-(*p*-Nitrobenzyloxycarbonylamino)pyrrolidine and Its Related Compounds from L-Aspartic Acid. 213

Ohkanda, Junko.
Structural Analysis of *N*-(ω-Phenylalkyl)substituted Quinoxalin-2(1*H*)-ones and -thiones. 357

Ohkura, Kazue.
Acid-catalyzed Photoreaction of 6-Chloro-1,3-dimethyluracil to *p*- and *m*-Xylene: Formation of Novel Photocycloadducts, 6-Methylene-9,11,x-trimethyl-9,11-diazapentacyclo[6.4.0.0^{1,3}.0^{2,5}.0^{4,8}]dodecane-10,12-diones and 5-Methylene-9,11,x-trimethyl-9,11-diazapentacyclo[6.4.0.0^{1,3}.0^{2,6}.0^{4,8}]dodecane-10,12-diones. 467

Ohmoto, Shinobu.
Reduction of Indigo: Simple Syntheses of 3-Acetoxy-, 1-Acetyl-2,3-dihydro-, 3-Acetoxy-3'-acetyl-, 3-Acetoxy-1,3'-diacetyl-2,2'-bisindoles, and 2,2'-Bisindole. 169

Ohta, Akira.
Preparation, Properties, and Oxidation of Novel Bis(1,3-dithiole) Compounds Containing a Di(2-thienyl)methane Unit. 263

Oka, Jun-ichiro.
Synthesis of Tetrahydro-1-benzazocin-2(1*H*)-ones Using 8-*endo-trig* Radical Cyclization of 2,2-Bis-(phenylthio)-*N*-[*o*-(prop-2-enyl)phenyl]acetamides. 203

Okada, Etsuji.
A Facile and Convenient Synthetic Method for Fluorine-containing 1,2-Dihydropyrimidines and Pyrimidines. 349

Okano, Takashi.
Synthesis of Indolizidine Derivatives Trifluoromethylated at Bridgehead Position*via* Acyl Iminium Ion Intermediates Derived from Ring-Chain Tautomerism of 5,5,5-Trifluoro-4-oxopentanoyl Arylethylamides. 227

Okazaki, Renji.
A Novel Reaction of an Overcrowded Germylene with Isothiocyanate Leading to the Formation of 4-Imino-1,3,2-dithiagermetane Ring System. 149

Omote, Masaaki.
Synthesis of a Fluorine Analog of Hematoporphyrin by Ring Closure. 89

Osuka, Atsuhiro.
Synthesis of a Covalently Linked Bacteriopyropheophorbide — Pyropheophorbide Hybrid Dimer. 165

Ozaki, Kunihiko.
Synthesis of Taxoids I. Regioselective Lewis Acid-mediated Ring-Opening of Aryl Orthoacetates. 305

P

Potier, Pierre.
Ethyl α-Amino-β,β-diethoxypropionate, a Useful Synthon for the Preparation of 3,4-Fused Pyridine-6-carboxylates from Aromatic Aldehydes. 379

R

Robb, Ernest W.
Environmentally Benign Chemistry: Microwave-induced Stereocontrolled Synthesis of β-Lactam Synthons. 405

Roberts, Malcolm.
Studies with Plant Cell Cultures of the Chinese Herbal Plant, *Tripterygium wilfordii*. Synthesis and Biotransformation of Diterpene Analogues. 95

Rossier, Jean-Claude.
cis-Fused Dihydrofurano-1,2,4-trioxanes. 367

S

Sakai, Mitsuru.
Synthesis of Optically Pure β-Phenylselenoalanine through Serine-β-lactone: A Useful Precursor of Dehydroalanine. 319

Sakaida, Tsutomu.
Synthesis of Indolizidine Derivatives Trifluoromethylated at Bridgehead Position *via* Acyl Iminium Ion Intermediates Derived from Ring-Chain Tautomerism of 5,5,5-Trifluoro-4-oxopentanoyl Arylethylamides. 227

Sakakibara, Jinsaku.
Synthesis and Central Nervous System Stimulant Activity of Camphor-1,2,4-triazines Fused with 1,2,4-

Triazole, Tetrazole and 1,2,4-Triazine. 117

Sakakibara, Sachiko.
A New Efficient Synthesis of Nicotianamine and 2'-Deoxymugineic Acid. 519

Sakamoto, Takeshi.
A New Synthesis of 1-Hydroxyindoles and Spectra of 1-Hydroxyindole. 157

Sasaki, Takuma.
Synthesis and Cytotoxicity of 5-Carbo Analogues of Acetomycin. 277

Sato, Ryu.
New Sulfur-Carbon Displacement Reaction and Systematic Desulfurization in Multi-Sulfur Linkages of Benzopentathiepin. 187

Sato, Soichi.
Simple Procedure for the Synthesis of 2,5-Bis(silylated) Thiophene *S*-Oxides with *m*-Chloroperbenzoic Acid in the Presence of $BF_3(Et_2O)$ 61

Sato, Tatsunori.
Synthesis of Tetrahydro-1-benzazocin-2(1*H*)-ones Using 8-*endo-trig* Radical Cyclization of 2,2-Bis-(phenylthio)-*N*-[*o*-(prop-2-enyl)phenyl]acetamides. 203

Sato, Yoshihiro.
Novel Synthesis of Heterocycles Using Nickel(0)-catalyzed [2+2+2] Cocyclization: Catalytic Asymmetric Synthesis of Isoindoline and Isoquinoline Derivatives. 443

Seki, Koh-ichi.
Acid-catalyzed Photoreaction of 6-Chloro-1,3-dimethyluracil to *p*- and *m*-Xylene: Formation of Novel Photocycloadducts, 6-Methylene-9,11,x-trimethyl-9,11-diazapentacyclo[6.4.0.0^{1,3}.0^{2,5}.0^{4,8}]dodecane-10,12-diones and 5-Methylene-9,11,x-trimethyl-9,11-diazapentacyclo[6.4.0.0^{1,3}.0^{2,6}.0^{4,8}]dodecane-10,12-diones. 467

Senboku, Hisanori.
Photoinduced Molecular Transformations. Part 160. Furan Annelation of 2-Hydroxynaphthoquinone Involving Photochemical Addition and Radical Fragmentation: Exclusion of the Intermediacy of [2+2] Cycloadduct in a One-Pot Formation of Furanoquinones by the Regioselective 3+2 Photoaddition of Hydroxyquinones with Alkenes. 341

Shang, Xiao.
Synthetic Studies of Forskolin. A Diels-Alder Approach to Corey's Endoperoxide. 143

Shiba, Ryuichi.
Rearrangement-Ring Expansion Reaction of Functionalized Cyclic Ethers. Stereoselective Synthesis of the ST- and XY-Ring Systems of Maitotoxin. 105

Shibutani, Kuniko.
Practical Synthesis of (*S*)-3-(*p*-Nitrobenzyloxycarbonylamino)pyrrolidine and Its Related Compounds from L-Aspartic Acid. 213

Shibuya, Shiroshi.
A Novel Synthesis of 1,2-Dehydro-1-aminophosphonates *via* Beckmann Rearrangement. Application to the Synthesis of α-Aminophosphonic Acid Derivatives. 111

Shioiri, Takayuki.
A New Efficient Synthesis of Nicotianamine and 2'-Deoxymugineic Acid. 519

Shirahama, Haruhisa.
Synthesis of Optically Pure β-Phenylselenoalanine through Serine-β-lactone: A Useful Precursor of Dehydroalanine. 319

Shiro, Motoo.
A Facile Synthesis of 2-Acylimino-3-biphenylmethyl-1,3,4-thiadiazoline Derivatives. 133

Singh, Sunil K.
Ethyl α-Amino-β,β-diethoxypropionate, a Useful Synthon for the Preparation of 3,4-Fused Pyridine-6-carboxylates from Aromatic Aldehydes. 379

Somei, Masanori.
Reduction of Indigo: Simple Syntheses of 3-Acetoxy-, 1-Acetyl-2,3-dihydro-, 3-Acetoxy-3'-acetyl-, 3-Acetoxy-1,3'-diacetyl-2,2'-bisindoles, and 2,2'-Bisindole. 169

Sugihara, Yoshiaki.
Synthesis of Highly Congested Bi- and Terthiophenes; 3,4,3',4'-Tetra-*tert*-butylbithiophene and 3',4'-Di-*tert*-butyl-2,2':5'2"-terthiophene. 75

Sugihara, Yoshiaki.
Formation of Cyclic Oligosulfides by Reaction of Hydrazones with Disulfur Dichloride. 255

Suginome, Hiroshi.
Photoinduced Molecular Transformations. Part 160. Furan Annelation of 2-Hydroxynaphthoquinone Involving Photochemical Addition and Radical Fragmentation: Exclusion of the Intermediacy of [2+2] Cycloadduct in a One-Pot Formation of Furanoquinones by the Regioselective 3+2 Photoaddition of Hydroxyquinones with Alkenes. 341

Suginome, Michinori.
New Synthetic Access to 1,3-Diaza-5-sila-2-boracyclohexane Frameworks by the Reaction of Borane with Bis[(*N*-arylimino)organosilylmethyl]silanes. 121

Sumiya, Toshio.

A Silver Salt — Iodine Reagent System for the Deprotection of Monothioacetals and Dithioacetals. 393

Suzuki, Yoshiaki.
6-Acetyl-8-hydroxy-2,2-dimethylchromene, an Antioxidant in Sunflower Seeds; Its Isolation and Synthesis and Antioxidant Activity of Its Derivatives. 139

Suzuki, Yumiko.
Synthesis and Reactivities of 1,3-Dimethyl-2-(α-hydroxybenzyl)imidazolium and 1,3-Dimethyl-2-(α-hydroxybenzyl)benzimidazolium Iodides. 417

T

Tagaki, Waichiro.
A Tribute to the Contributions of Professor Shigeru Oae in Heterocyclic Chemistry. 53

Takagi, Toshiyuki.
Synthesis of a Fluorine Analog of Hematoporphyrin by Ring Closure. 89

Takahashi, Katsumi.
Diastereoselective 1,3-Dipolar Cycloaddition of 2-(α,β-Unsaturated) Acyl-3-phenyl-*l*-menthopyrazoles. 289

Takahashi, Tamiko.
Optically Pure Alkoxychlorosulfuranes. Synthesis and Transformation to Chiral Sulfoxides, *N*-*p*-Tosylsulfilimines, and Sulfonium Ylides. 325

Takemura, Yoshiyuki.
6-Acetyl-8-hydroxy-2,2-dimethylchromene, an Antioxidant in Sunflower Seeds; Its Isolation and Synthesis and Antioxidant Activity of Its Derivatives. 139

Takeuchi, Hiroshi.
A Facile and Convenient Synthetic Method for Fluorine-containing 1,2-Dihydropyrimidines and Pyrimidines. 349

Tamiaki, Hitoshi.
Synthesis of a Covalently Linked Bacteriopyropheophorbide — Pyropheophorbide Hybrid Dimer. 165

Tanabe, Noriko.
Synthesis and Reactivities of 1,3-Dimethyl-2-(α-hydroxybenzyl)imidazolium and 1,3-Dimethyl-2-(α-hydroxybenzyl)benzimidazolium Iodides. 417

Tani, Keita.
2-Methyl-4-nitroisoxazolin-5-one: Ring Transformation to 3-Nitropyrroles. 81

Tatematsu, Satoshi.
Syntheses of 1-Substituted (S_S)-3-*p*-Tolylsulfinyl-1,4-dihydropyridines, Chiral NADH Model Compounds. 537

Terashima, Masanao.
Acid-catalyzed Photoreaction of 6-Chloro-1,3-dimethyluracil to *p*- and *m*-Xylene: Formation of Novel Photocycloadducts, 6-Methylene-9,11,x-trimethyl-9,11-diazapentacyclo[6.4.0.0^{1,3}.0^{2,5}.0^{4,8}]dodecane-10,12-diones and 5-Methylene-9,11,x-trimethyl-9,11-diazapentacyclo[6.4.0.0^{1,3}.0^{2,6}.0^{4,8}]dodecane-10,12-diones. 467

Ting, Yo.
Synthesis of Highly Congested Bi- and Terthiophenes; 3,4,3',4'-Tetra-*tert*-butylbithiophene and 3',4'-Di-*tert*-butyl-2,2':5'2"-terthiophene. 75

Tohda, Yasuo.
2-Methyl-4-nitroisoxazolin-5-one: Ring Transformation to 3-Nitropyrroles. 81

Tokitoh, Norihiro.
A Novel Reaction of an Overcrowded Germylene with Isothiocyanate Leading to the Formation of 4-Imino-1,3,2-dithiagermetane Ring System. 149

Tokuda, Masao.
Photoinduced Molecular Transformations. Part 160. Furan Annelation of 2-Hydroxynaphthoquinone Involving Photochemical Addition and Radical Fragmentation: Exclusion of the Intermediacy of [2+2] Cycloadduct in a One-Pot Formation of Furanoquinones by the Regioselective 3+2 Photoaddition of Hydroxyquinones with Alkenes. 341

Tokunaga, Yuji.
Synthesis of Benzo[*a*]quinolizines by the Intramolecular Double Michael Reaction under Three Different Conditions. 531

Tominaga, Yoshinori.
Synthesis and Chemiluminescence of 1,3-Disubstituted 4-Hydroxypyrazolo[4',3':5,6]pyrido[2,3-*d*]pyridazine-5,8-(6*H*,7*H*)-diones. 85

Tomori, Hiroshi.
Practical Synthesis of (*S*)-3-(*p*-Nitrobenzyloxycarbonylamino)pyrrolidine and Its Related Compounds from L-Aspartic Acid. 213

Tsuda, Hideyuki.
6-Acetyl-8-hydroxy-2,2-dimethylchromene, an Antioxidant in Sunflower Seeds; Its Isolation and Synthesis and Antioxidant Activity of Its Derivatives. 139

Tsuda, Yoshisuke.
Thiovalidamine Derivatives of *manno*- and *gluco*-Type: Remote Activation and Anchimeric Assistance. 427

Tsujihara, Kenji.
Synthesis of Taxoids I. Regioselective Lewis Acid-

mediated Ring-Opening of Aryl Orthoacetates. 305

U

Ueda, Masaru.
A Silver Salt — Iodine Reagent System for the Deprotection of Monothioacetals and Dithioacetals. 393
Ueda, Taisei.
Synthesis and Central Nervous System Stimulant Activity of Camphor-1,2,4-triazines Fused with 1,2,4-Triazole, Tetrazole and 1,2,4-Triazine. 117
Uenishi, Jun'ichi.
Synthesis and Cytotoxicity of 5-Carbo Analogues of Acetomycin. 277

W

Wada, Yukihisa.
Synthesis of a Covalently Linked Bacteriopyropheophorbide — Pyropheophorbide Hybrid Dimer. 165
Wagatsuma, Makoto.
New Sulfur-Carbon Displacement Reaction and Systematic Desulfurization in Multi-Sulfur Linkages of Benzopentathiepin. 187

Y

Yamada, Hidetoshi.
Synthesis of β- and Iso-β-cycloawaodorin. 71
Yamada, Masami.
Synthesis of Benzo[*a*]quinolizines by the Intramolecular Double Michael Reaction under Three Different Conditions. 531
Yamada, Yuji.
Synthesis and Cytotoxicity of 5-Carbo Analogues of Acetomycin. 277
Yamaguchi, Tetsuo.
Synthesis of Taxoids I. Regioselective Lewis Acid-mediated Ring-Opening of Aryl Orthoacetates. 305
Yamashita, Yoshiro.
Preparation, Properties, and Oxidation of Novel Bis(1,3-dithiole) Compounds Containing a Di(2-thienyl)methane Unit. 263
Yokomatsu, Tsutomu.
A Novel Synthesis of 1,2-Dehydro-1-aminophosphonates *via* Beckmann Rearrangement. Application to the Synthesis of α-Aminophosphonic Acid Derivatives. 111
Yokota, Kouichi.
A Silver Salt — Iodine Reagent System for the Deprotection of Monothioacetals and Dithioacetals. 393
Yonemitsu, Osamu.
Synthesis and Cytotoxicity of 5-Carbo Analogues of Acetomycin. 277
Yoshida, Hiroshi.
Convenient One-Pot Synthesis of Sodium Salt of 5-Mercapto-1,2,3-thiadiazole. 459
Yoshida, Tohru.
Structural Analysis of *N*-(ω-Phenylalkyl)substituted Quinoxalin-2(1*H*)-ones and -thiones. 357
Yoshida, Yoshinori.
A Novel Synthesis of 1,2-Dehydro-1-aminophosphonates *via* Beckmann Rearrangement. Application to the Synthesis of α-Aminophosphonic Acid Derivatives. 111
Yoshioka, Noriko.
Synthesis and Chemiluminescence of 1,3-Disubstituted 4-Hydroxypyrazolo[4',3':5,6]pyrido[2,3-*d*]pyridazine-5,8-(6*H*,7*H*)-diones. 85

Z

Zhang, Jian.
Optically Pure Alkoxychlorosulfuranes. Synthesis and Transformation to Chiral Sulfoxides, *N*-*p*-Tosylsulfilimines, and Sulfonium Ylides. 325
Zhang, Shaozhong.
Simple Procedure for the Synthesis of 2,5-Bis(silylated) Thiophene *S*-Oxides with *m*-Chloroperbenzoic Acid in the Presence of $BF_3(Et_2O)$. 61

Subject Index Volume 44, 1997

A

Acetomycin Analogue 277
3-Acetoxy-2,2'-bisindole 169
1-Acetyl-2,3-dihydro-2,2'-bisindole 169
Acid-catalyzed Photoreaction 467
Acyliminium Ion 227
Acyliminothiadiazoline 133
N-Acylpyrazole 289
Adenine 7-Oxide 573
Alkoxyl Radical 341
5-Allyl-4-methoxy-2-oxazolidinone 479
N-Allyl Protective Group 213
α-Aminophosphonic Acid 111
5-Aminopyrazole 85
(*S*)-3-Aminopyrrolidine 213
5-Amino-1,2,3-thiadiazole 197
Amphidinium Species 543
Amphidinolide 543
Anchimeric Assistance 427
Angiotensin II 133
Antagonist 133
Anthelmintic Activity 129
Antileukemic Activity 125
Antioxidant 139
Anti-tumor Activity 277
Aromatic Aldehyde 379
Aroylheteroarene 417
Aryl Aldehyde 435
Aryl Isocyanide 121
L-Aspartic Acid 213
Asymmetric Dihydroxylation 305
Asymmetric Synthesis 443
Azaindole 379

B

Bacteriopyropheophorbide 165
Beckmann Rearrangement 111
1-Benzazocine 203
Benzimidazolium Salt 417
Benzoin Condensation 417
Benzonaphthyridine 237
Benzopolysulfide 187
Benzo[*a*]quinolizine 531
1-Benzoyl-1,4-dihydropyridine 537
BETMIC 67
Bis(4,5-benzo-1,3,2-diazasilacyclopentene) 177
Bis(1,3,2-diazasilacyclopentane) 177
2,2'-Bisindole 169
Bis(2-silaimidazolidine) 177
Bis(2-silaimidazoline) 177
2,5-Bis-substituted Thiophene 61
β,β-Bis(trifluoroacetyl)vinylamine 349
Bithiophene 75
Boron Trifluoride Etherate 61
tert-Butyldimethylsilyl Trifluoromethanesulfonate 531

C

Camphortetrazolo-1,2,4-triazine 117
Camphor-1,2,4-triazino-1,2,4-triazine 117
Camphor-1,2,4-triazolo-1,2,4-triazine 117
Carbapenem Synthon 405
Carbodithioate 427
γ-Carboline 379
Carbonyl Oxide 367
Cascade Reaction 531
Cation 263
Cell Culture Biotransformation 95
Central Nervous System Stimulant Activity 117
Chemiluminescence 85
Chiral Catalyst 435
Chiral Sulfoxide 537
Chiral Synthesis 479
Chloral *N*-Tosylhydrazone 459
6-Chloro-1,3-dimethyluracil 467
Chloromethyl(dimethyl)(2-thienylmethyl)silane 509
m-Chloroperbenzoic Acid 61
[2+2+2] Cocyclization 443
Congested Thiophene 75
Corey's Endoperoxide 143
Cu(II) Oxide 237
Cyclic Ether 105
Cyclic L-Rhamno Heptaose 71

Cyclic Silazane 177
8-*endo*-*Trig* Cyclization 203
Cycloaddition 197
[2+2] Cycloaddition 149
meta-Cycloadduct 467
ortho-Cycloadduct 467
β-Cycloawaodorin 71
iso-β-Cycloawaodorin 71
Cyclobutane 125
Cyclooligosaccharide 71
Cytotoxicity 277, 543

D

Dehydroalanine Precursor 319
1,2-Dehydro-1-aminophosphonate 111
2'-Deoxymugineic Acid 519
Deprotection 393
Desulfurization 187
Diastereoselective Reaction 289
1,3-Diaza-5-sila-2-boracyclohexane 121
Diazoacetonitrile 197
DIBAL Reduction 157
Dicarbonyl Compound 81
Dichloro(2-thienylmethyl)vinylsilane 509
Diels-Alder Approach 143
Diethylzinc 435
1,4-Dihydropyridine 537
1,3-Diimine 121
2,2-Dimethylchromene 139
2,2-Dimethyl-2,3-dihydronaphtho[1,2-*b*]furan-4,9-dione 341
2,2-Dimethyl-2,3-dihydronaphtho[2,3-*b*]furan-4,5-dione 341
Dimethyl(2-thienylmethyl)silylacetic Acid 509
Dinoflagellate 543
2,5-Diphenylfuran 367
1,3-Dipolar Cycloaddition 289
Disulfur Dichloride 255
Diterpene Synthesis 95
Dithioacetal 393
1,3-Dithiole 263

E

Electrochemistry 263
cis-Elimination 319
trans-Elimination 319
Enantiocontrolled Synthesis 129
Enantioselective Addition 435
Endoperoxide 367
Energy Transfer 165
Environmentally Benign Reaction 405
Ethyl α-Amino-β,β-diethoxypropionate 379

F

Fluorine 89
Fluorine-containing Building Brock 349
Fluorine-containing 1,2-Dihydropyrimidine 349
Fluorine-containing Pyrimidine 349
Forskolin 143

G

Geissman-Waiss Lactone 479
Germanethione 149
Germylene 149
Guanine 7-Oxide 573

H

Hematoporphyrin 89
Hexathiepane 255
Horner-Emmons Reaction 487
Hybrid Dimer 165
Hydrazino-camphor-1,2,4-triazine 117
Hydrazone 255
Hydrogen Sulfide 197
1-Hydroxyindole 157
Hypohalite 341
Hypoxanthine 7-*N*- Oxide 573

I

Imidazole 67
Imidazolium Salt 417
4-Imino-1,3,2-dithiagermetane 149
Indigo 169

Indolizidine 227
Intramolecular Double Michael Reaction 531
Iodine 393
Iodolactonization 277
Isoindoline 443
Isoquinoline 379, 443
Isoquinuclidinylmethanol 435
Isoxazolidinecarboxylic Acid 289

K

Kainic Acid 129
Kinetic Stabilization 149

L

β-Lactam 405
Lewis Acid 305
Lithium 2,2,6,6-Tetramethylpiperidide 487
Luminol 85

M

Macrolide 543
Maitotoxin 105
Marine Polycyclic Ether 105
6-Mercaptopurine 7-*N*-Oxide 573
5-Mercapto-1,2,3-thiadiazole Salt 459
Mercury(II) Oxide-Iodine Reagent 341
Meridine 237
3-Methylthiomaleimide 85
6-Methylthiopurine 7-*N*-Oxide 573
Microwave-induced Reaction 405
Modified Grignard Reaction 509
Monothioacetal 393
Multi-sulfur Linkage 187

N

NADH Model 537
Naphthoquinone 341
Neuroexcitatory Activity 129
Nickel 443
Nicotianamine 519
β-Nitroenamine 81
4-Nitroisoxazolin-5-one 81
β-Nitropyrrole 81
Norcamphor 129
Nucleophilic Aroylation 417
Nucleophilic Reaction 325

O

Orthoacetate 305
Oxabicyclo[3.2.1]octane 125
2-Oxazolone 479
Oxidation 263
Oxime Mesylate 111

P

Pd(0) Catalysis 237
Pd/C-Catalyzed Deallylation 213
Pentathiane 255
Perlolidine 237
3-Phenyl-*l*-menthopyrazole 289
β-Phenylselenoalanine 319
Phosphorus Ylide 187
[2+2] Photocycloaddition 341
Photodynamic Therapy 89
Photolysis 341
Photo-Oxygenation 367
Photosynthesis 165
Phytosiderophore 519
Polysulfide 459
Porphyrin 89
Potassium Sulfide 459
Pyropheophorbide 165
Pyrrole 67
Pyrrolidine-Ring Formation 213

Q

Quinolizidine 227

Quinoxalin-2(1*H*)-one 357
Quinoxalin-2(1*H*)-thione 357

R

Radical Cyclization 203
Rearrangement-Ring Expansion 105
Reduction 169
Reductive Alkylaton 519
Regioselectivity 305
Remote Activation 427
Ring-Chain Tautomerism 227
Ring Closure 89
Ring Expansion 125
Ring Transformation 81

S

β-Scission 341
Serine-β-lactone 319
Silver Salt 393
α-Silylalkylphosphine Chalcogenide 487
Si-Si Bond 121
Stereocontrolled Synthesis 405
Stereoselective Reduction 121
2-(β-Styryl)tetrahydropyran 487
Sulfilimine 325
Sulfonium Ylide 325
Sulfoxide 325
Sulfurane 325
Sunflower Seed 139

T

Tandem Peterson-Michael Reaction 487
Tandem Reaction 531
Taxoid 305
Terthiophene 75
Tertiaryphosphine 187
Tetrahydro-1-benzazocin-2(1*H*)-one 203
Tetrathiolane 255
Thermal Glycosylation 71
1,3,4-Thiadiazole 133
Thiophene 263
Thiophene *S*-Dioxide 61
Thiophene *S*-Oxide 61
Thiovalidamine 427
Titanium(IV) Chloride 111
TOSMIC 67
Tributyltin Hydride 203
Trichothecane 125
Tricyclic Pyridazine 85
Trifluoromethylated Compound 227
1-[2-(Trimethylsilyl)ethoxy] Group 157
Tripdiolide 95
Tripterygium wilfordii 95
Triptolide 95
Tri-(2-thienyl)vinylsilane 509

U

Uv-Vis Spectra 75

V

Validamine 427

X

X-Ray Analysis 75, 133, 367
Xylene 467

Z

Zinc Acetate 105